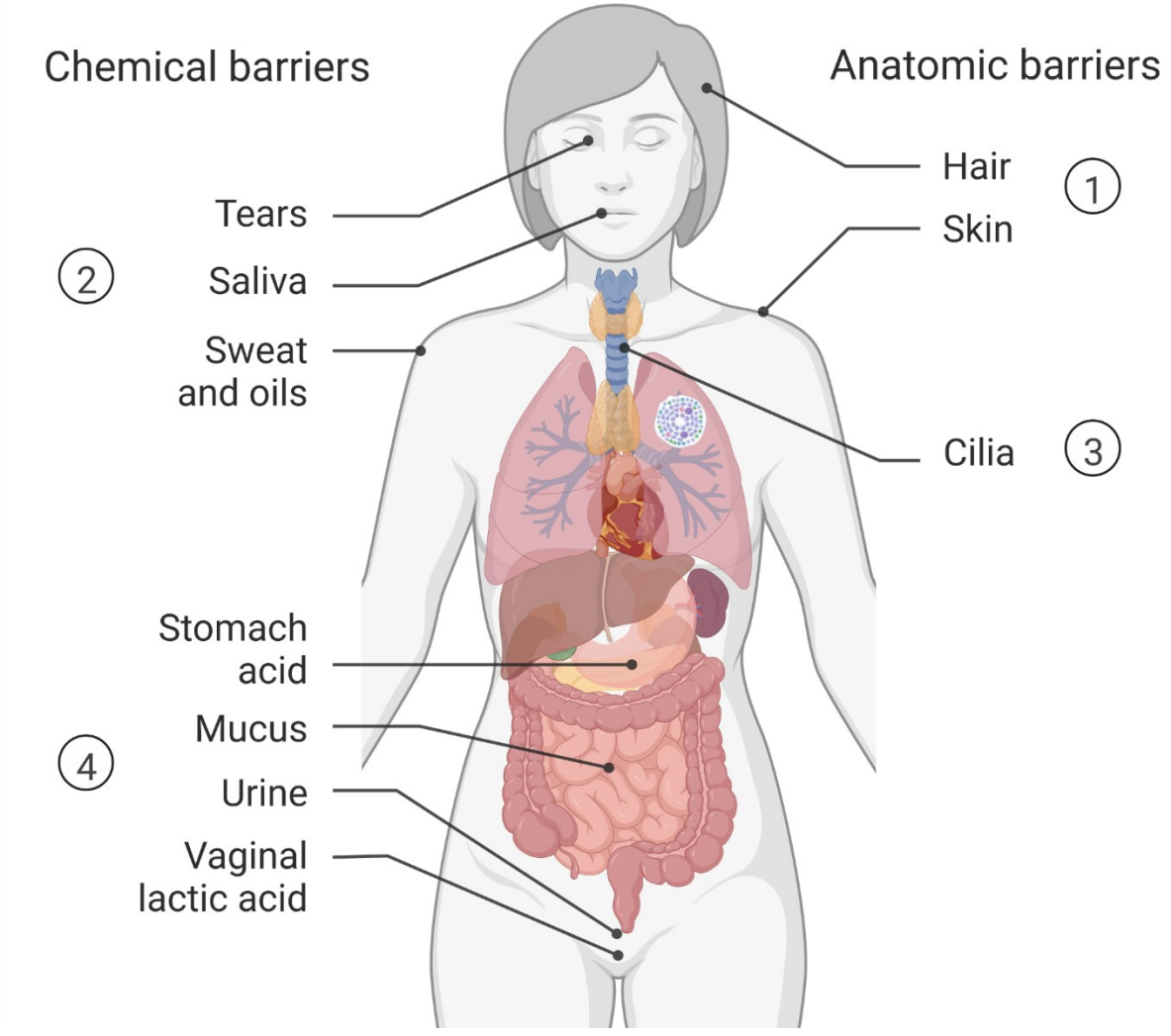
Anatomic and chemical barriers of innate immunity

Innate immunity senses and responds to nonself and danger signals from pathogen invasion or tissue damage. When the host's anatomic and chemical barriers such as skin, respiratory epithelium, salivary and mucosal enzymes, among others, prove ineffective and become breached by pathogens, these microbial agents will be rapidly faced with the innate cellular defences.

Once considered crude, the innate immune system is now recognised as a sophisticated mechanism essential for the maintenance of a healthy tissue microenvironment. In this section, we will look at different components of innate immunity including soluble recognition molecules and cellular components.



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Look at this image of the human body. Each of the numbered regions represents one of the anatomical or chemical barriers of innate immunity, as follows:

1. Anatomic barriers – skin, hair
2. Chemical barriers – tears, sweat and oils, and saliva
3. Anatomic barriers – cilia (respiratory tract)
4. Chemical barriers – stomach acid, urine, mucus, vaginal lactic acid

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